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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,642	06/26/2003	Vincent J. Zimmer	42P16429	8722

7590 12/13/2006

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EXAMINER	
TREAT, WILLIAM M	

ART UNIT	PAPER NUMBER
2181	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/607,642	ZIMMER ET AL.	
	Examiner	Art Unit	
	William M. Treat	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10,12-18,29,30 and 32-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-10, 12-18, 29-30, and 32-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Claims 1, 3-10, 12-18, 29-30, and 32-37 are presented for examination.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-6, 8-10, 12-15, 17-18, 29-30, 32-35, and 37 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Datta (Patent No. 6,081,890).

4. The grounds, and related arguments, for rejecting claims 1, 3-6, 8-10, 12-15, 17-18, 29-30, 32-35, and 37 as being clearly anticipated by Datta, presented in the examiner's previous action, continue and are hereby incorporated by reference.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 7, 16, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Datta (Patent No. 6,081,890).

8. Datta teaches independent claims 1, 10, and 29 from which claims 7, 16, and 36 depend, respectively. (See paragraphs 3 and 4, *supra*.) While he specifically taught his invention applied to IA-32 and IA-64 ISAs, he did not recite its use with 16-bit code as applicants claim in claims 7, 16, and 36. However, he does say at col. 7, lines 61-63: "while the disclosed embodiments refer to IA-32 and IA-64 ISAs, the invention is applicable to other ISAs" (i.e., it could be applied to a 16-bit ISA, too).

9. Claims 1, 3-10, 12-18, 29-30, and 32-37 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention. As best the examiner is able to determine, applicants' claimed invention and the invention of Datta's patent are both directed to the Intel Itanium processor line. The examiner has supplied applicants with a copy of an Intel press release dated Oct. 4, 1999 and entitled "Intel Selects Itanium as the New Brand Name for its First in a Family of IA-64 Processors" stating engineering samples of the Itanium processor chips had been sent to Intel customers and that production was scheduled for 2000. If the functionality for Datta's invention was incorporated into the Itanium processors produced in 2000, this would constitute an on-sale bar to applicants' claimed invention.

10. Applicants have argued, in substance, that Datta fails to disclose "transitioning from the native mode runtime to a legacy mode runtime ***in response to the legacy type hardware IRQ*** to service the legacy type hardware IRQ". Applicants have defined in their claims the difference between native mode runtime and legacy mode runtime is

that native mode runtime is a higher performance state of the processor defined by the number of bits processed in parallel. At col. 3, lines 27-29, Datta taught:

> For the disclosed embodiment of system 100, processors 110 may implement a first instruction set architecture (ISA), e.g., IA-32 and a second ISA, e.g., IA-64.

Clearly, Datta taught a native mode runtime and legacy mode runtime to the extent applicants have defined it in their claims. Also, at col. 7, lines 18-43, Datta taught:

> The mechanism described above may also be used when an operating system loader program requests the firmware to make a legacy firmware call, and when a hardware interrupt occurs. A variation of this mechanism, which is described below, may also be used to process selected hardware interrupts. For example, selected hardware interrupts may be handled through a legacy interrupt vector table. This table resides at architecturally specified address locations, eliminating the need to access it through the data structure described above. When a hardware interrupt occurs, processor control reverts to native mode (IA-64), and the native firmware determines if the interrupt handler is legacy firmware code. If it is, the native firmware module reads the legacy interrupt vector table, using architected legacy address locations, to determine the address of the legacy interrupt routine. The native firmware sends the CPU directly to the legacy service routine after adjusting the return stack pointer to point to an IA-32 illegal instruction. The illegal instruction may be planted in the legacy firmware module by the native firmware module. After the legacy handler executes, the

illegal instruction is encountered, generating a voluntary fault that returns control to native mode.

Certainly, given that Datta taught in the section quoted above that when a hardware interrupt occurs, processor control reverts to native mode and when the native mode firmware determines the appropriate interrupt handler for the hardware IRQ is legacy firmware code, the native firmware sends the CPU directly to the legacy service routine, applicants must recognize that all these actions are ***in response to the legacy type hardware IRQ*** and that there is clearly a transition from native firmware (i.e., native mode runtime) to legacy firmware (i.e., legacy mode runtime) in the recited actions. That is all that is required by the language argued by applicants.

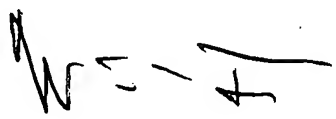
11. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication should be directed to William M. Treat at telephone number (571) 272-4175.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WILLIAM M. TREAT
PRIMARY EXAMINER